UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,843	06/27/2001	George H. Flammer III	011727-78.00US	3725

7590 07/21/2005	**EXAMINER**
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ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/894,843	FLAMMER, III
	Examiner	Art Unit	
	Christopher P. Heinrichs	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _6/3/2005_.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _2-4 and 6-18_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) _18_ is/are allowed.

6) ☒ Claim(s) _2-4,6-12 and 14-18_ is/are rejected.

7) ☒ Claim(s) _13_ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _03 June 2005_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This communication is in response to the amendment of 6/3/05. All changes made to the Specification, Drawings, and Claims have been entered. Accordingly, Claims 2-4 and 6-18 are currently pending in the application.

Claim Objections

2.   Claims 13 and 18 are objected to because of the following informalities: Both claims refer to a "PRP" state or mode. "PRP" should be further defined within the scope of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 2, 6, 9, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,785,252 to Zimmerman et al.

5.   With regard to claim 9, Zimmerman discloses, in a mesh network having a

plurality of communication nodes (fig 1), wherein one or more nodes may be either a

contending node (fig 1 items 110 may be contending nodes) when sending data for

transmission within the mesh network or a controlling node (fig 1 item 106 may be a

controlling node) for receiving data for transmission within the mesh network, a method

for providing contending nodes with access to a controlling node comprising:

withholding at a contending node requests for access to a controlling node (bandwidth

requests, col 12 line 51) until receipt at the contending node of a poll request packet

broadcast from the controlling node (col 12 lines 61-65), the poll request packet

containing information indicating availability of a communication slot (uplink bandwidth);

broadcasting from the controlling node to a plurality of contending nodes the poll

request packet when the controlling node is ready to provide services (the base station

"allocates bandwidth to allow the CPEs to respond with a bandwidth request," therefore

it is ready to provide the service of receiving a bandwidth request); directing from the

contending node a poll packet to request access to the controlling node (the CPEs

"respond with a bandwidth request"), and broadcasting from the controlling node to all of

the plurality of contending nodes a control packet containing rules information for each

contending node requesting access to follow in order to send data to the controlling

node (col 22, under the heading "Uplink Bandwidth Allocation – One Embodiment",

describes the uplink bandwidth allocation process, said allocated bandwidth being the

channel for sending "data to the controlling node," wherein the Bandwidth Allocation

Map of fig 13 is the rules information that is broadcast from the controlling node, the BS,

to the all of the plurality of contending nodes, CPE1 – CPEk, as is illustrated in the

figure).

6.   With regard to claim 2, Zimmerman discloses all aspects of the method of claim 9

and further discloses that in response to the contention resolution packet each

contending node requesting access is caused to transmit data to the controlling node in

accordance with the rules information (col 12 lines 14-17).

7.   With regard to claim 10, the broadcasting means are fig 1 item 108, the means at

said requesting node for withholding and directing are fig 1 item 110, and the means

operative to broadcast a control packet are the Bandwidth Allocation Algorithm of fig 13,

from which one can see that the control packet is broadcast. The above cited means

perform the method of claim 9, the elements of which are contained in claim 10 with the

exceptions that the contending nodes of claim 9 are referred to as requesting nodes in

claim 10 (the contending nodes cited in claim 9 are also the requesting nodes of claim

10, as they request bandwidth), and the controlling node of claim 9 is referred to in the

body of claim 10 as a congested node, and it can be seen in col 22 lines 18-20 that the

controlling node is at times congested, hence a congested node, as there may be more

data on a queue at a given time than can be transmitted at said given time. Congestion

of the controlling node is also illustrated by indication 516 of fig 5.

8.   With regard to claim 6, Zimmerman discloses all aspects of the apparatus of

claim 10 and further discloses that in response to the contention resolution packet each

contending node requesting access is caused to transmit data to the controlling node in

accordance with the rules information (col 12 lines 14-17), wherein the means for doing

so are fig 1 items 110.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating
           obviousness or nonobviousness.

11.   Claims 3, 7, 11-12, and 15-17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US Patent 6,785,252 to Zimmerman et al in view of US Patent

6,097,707 to Hodzic et al.

12.   With regard to claim 11, Zimmerman discloses, as set forth in the rejection of

claim 9, all aspects of the method of claim 11 up until the "in response" step. The

Bandwidth allocation map is the contention resolution packet and contains rules

information as set forth in the rejection of claim 9. Zimmerman further discloses that in

response to the contention resolution packet each contending node requesting access

is caused to transmit data to the controlling node in accordance with the rules

information (col 12 lines 14-17), and that broadcasts are sent to all contending nodes

(CPEs) as set forth in col 9 lines 41-42. Zimmerman fails to disclose a mechanism for

the acknowledgement of *traffic data* of the col 12 lines 14-17 reference, which is higher

level data (Data on connection as illustrated by arrows between BS Higher Layers and

CPE Higher Layers). However, Hodzic discloses a method for the acknowledgement

from the controlling node (CCU) to the contending nodes (all TUs) (col 7 lines 30-32,

and col 9 lines 25-31) in a similar network topology (fig 1). It would have been obvious

to one ordinarily skilled in the art at the time of the invention to apply the broadcast

acknowledgment of link-level data disclosed by Hodzic with the method disclosed by

Zimmerman to arrive at the invention of claim 11. The motivation to do so would have

been that Zimmerman did not provide a way to acknowledge successful receipt of link

level data, and it is well known in the art that acknowledging successful receipt of data

removes the need to resend said data, thereby conserving valuable bandwidth.

13.   With regard to claim 12, Zimmerman and Hodzic disclose the method of claim

11. Just as Zimmerman fails to disclose a method for acknowledging link level data

transmissions in the uplink direction, which is why it is obvious to use the acknowledgement method of Hodzic, Zimmerman fails to disclose acknowledging data transmissions in the opposite direction, from the controlling node to the contending node. For the same reasons as set forth in the rejection of claim 11 it would be obvious to include the mechanism of acknowledging the receipt of data by the contending nodes from the controlling node to arrive at the method of claim 12. The motivation to do so would be as set forth in the rejection of claim 11.

14.   With regard to claims 15 and 16, Zimmerman and Hodzic disclose the method of claim 11 and Zimmerman further discloses providing poll minislots following the broadcasted poll request packet (fig 7, items 404", 404'", and 410), the minislots establishing times (inherent function of slots in such an environment) during which contending nodes may direct poll packets (request) for requesting access to the controlling node (col 18 lines 45-46). Item 410 represents the contention minislots for contending nodes not already assigned minislots for requesting access, as it is dedicated as the Broadcast Bandwidth Request Contention Slots. Items 404' and 404'" represent the reserved minislots for contending nodes already assigned minislots for requesting access to the controlling node, as these minislots are reserved for *multicast group* bandwidth requests, as set forth in col 18 lines 42-45, so a contending node must be in the multicast group to use these slots.

15.   With regard to claim 17, since the contention minislots are contended for, this

means that the contending nodes have not been given a specific set of rules for access

during these times. It is obvious to one ordinarily skilled in the art that these slots are

accessed, or used, randomly by contending nodes. Contention implies that contending

nodes get access when they can, and without a schedule this is unpredictable in nature.

16.   Claims 3 and 7 are rejected for all reasons as set forth in the rejection of claim

12, wherein the means are fig 1 items 110.

17.   Claims 4, 8, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable

over US Patent 6,785,252 to Zimmerman et al in view of US Patent 6,097,707 to Hodzic

et al as applied to claim 11 above, and further in view of US Patent 5,815,667 to Chien

et al.

18.   With regard to claim 14, Zimmerman and Hodzic disclose the invention of claim

11 but fail to explicitly disclose the purging of data upon receipt of the acknowledgment.

packets. However, Chien discloses level operations in the context of communication

between networks and nodes in the background of his invention (col. 1, lines 55-58).

Chien gives an example of data packet communication between a transmitting and

receiving node and explicitly cites the method of purging data packets at the

transmitting node after receipt of a signal acknowledging (ACK) successful reception of

the transmitted data packets by the receiving node (col. 1, line 64 - col. 2, line 5). This

is an accompaniment to the Acknowledgment of successful receipt of data disclosed by

Hodzic and obvious for the same reasons, as Zimmerman simply does not explicitly

disclose it. Combining the method disclosed by Chien and the method of claim 11

would produce the method of claim 14. Therefore, it would have been obvious to one

normally skilled in the art at the time of the claimed invention to use the method taught

by Chien for packet communication reliability, thereby ensuring reliable packet data

transfer in a mesh communication packet network. The motivation to do so would have

been that there would be no need to retain data that has been acknowledged by the

recipient, as it would not need to be resent since it has been acknowledged.

19.   Claims 4 and 8 are rejected for all reasons as set forth in the rejection of claims

12 and 14, wherein the means are fig 1 items 110.

Allowable Subject Matter

20.   Claim 18 is allowed.

21.   The following is an examiner's statement of reasons for allowance: The prior art

used in the rejection of claim 11 does not disclose two distinct modes, as does claim 18

in the PRP and non-PRP modes. This inclusion of the two distinct modes is the primary

reason for the allowance of claim 18.

Any comments considered necessary by applicant must be submitted no later

than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

22.   Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

23.   Applicant's arguments with respect to claims 2-4 and 5-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

24.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

25.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

    a.   Chuah (US 6,567,416), Method for Access Control in a Multiple Access System for Communications Networks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Heinrichs whose telephone number is 571-272-8397. The examiner can normally be reached on Monday through Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

C. Heinrichs
AU 2663

RICKY NGO
PRIMARY EXAMINER

7/20/05